

ARNOLD ARBORETUM

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The Flowering Dogwood (*Cornus florida*). It is perhaps not necessary to call attention again to this tree which in recent years has been planted in considerable numbers in those parts of the northeastern states where it is hardy, but the Flowering Dogwood has been exceptionally beautiful this year, and its value for the decoration of the parks and gardens of eastern North America cannot be too often insisted on. *Cornus florida* "composes well," as landscape gardeners would say, with the vegetation of eastern America, that is, where it is planted under our native trees or along the borders of natural woods it never looks out of place. In spring it enlivens the forest with sheets of the snow white floral bracts which surround the heads of small yellow flowers. In October the leaves of not one of our smaller native trees assumes more beautiful shades of crimson, scarlet, orange or yellow, and as the leaves change color gradually leaves which are still green are often mixed with those which have become brightly colored. The autumn beauty of the leaves is increased, too, by the contrast in the colors of their upper and lower surfaces, for only the upper surface changes color, the lower retaining until the leaves fall the pale or nearly white color of summer. In the autumn, too, the clusters of bright scarlet fruits add another charm to this tree which is often short-lived for birds devour the fruit almost as fast as it ripens. The conspicuous gray flower-buds which open the following spring are formed in the late summer and add to the beauty and interest of the tree during the autumn and winter. A variety of *Cornus florida* with red floral bracts was found in Virginia several years ago and has been

propagated and sold by American nurserymen. When in flower it is a showy tree but lacks the charm of the normal species. A variety of the normal form with pendulous branches is in the Arboretum collection but has no particular interest or beauty, and a form with flower-heads surrounded by a double row of bracts, which was a good deal advertised a few years ago, has little to recommend it. Beautiful as it is the eastern Flowering Dogwood is surpassed by the species of the northwest coast region, *Cornus Nuttallii*, which is a tree sometimes seventy or eighty feet high with heads of bracts five or six inches across. *Cornus Nuttallii* grows in damp woods in the shade of large coniferous trees, and it is difficult to keep it alive beyond the limits of its native forests. It has never succeeded in the Arboretum and has flowered in Europe in only a few gardens. The Japanese Flowering Dogwood, *Cornus kousa*, and its Chinese variety are hardy and handsome little trees which flower later in the season than our native species, with which they do not compare in beauty of flowers, foliage or fruit.

The Sassafras in Autumn. In good years and bad years the Sassafras never fails to become a conspicuous object of beauty in October when its dark green leaves turn yellow and orange color more or less tinged with red. This statement gives little idea of the warmth of color which the Sassafras produces when it grows, as it often does, on the border of a forest of Oak-trees on which the leaves are still green. The Sassafras is a handsome tree at other seasons of the year. In winter it is conspicuous by its deeply furrowed dark cinnamon-gray bark and bright green branchlets which in early spring are covered before the leaves appear with innumerable clusters of small bright yellow flowers. The leaves, which are sometimes deeply three-lobed and sometimes entire on the same branch, are not attacked by insects. The fruit is a bright blue berry surrounded at the base by the much enlarged and thickened calyx of the flower raised on a long bright red stalk. Among northern trees only Magnolias produce such bright-colored fruits. There is little time, however, to enjoy the fruit of the Sassafras for birds eagerly seek it as it ripens.

Crataegus. A few of the Old World Hawthorns produce fruit as large and handsome as any of the American species. The largest and handsomest is that of the Manchurian and Chinese *Crataegus pinnatifida* which is cultivated in orchards by the Chinese for its dark red fruits. Very beautiful this year is a variety of the European *C. oxyacantha* (var. *Gireoudii*) with thick, slightly lobed, dark green leaves and bright red, lustrous, short-oblong fruits half an inch in length. The branches of the small tree in the new collection of exotic Thorns on Peter's Hill are covered from end to end with fruit clusters which make it one of the most brilliant plants in the Arboretum this week. *Crataegus hiemalis*, a European tree of doubtful origin and by some authors considered a hybrid, is covered this year with its lustrous, dark wine-colored, ellipsoidal fruit half an inch long, drooping on long slender stems. More beautiful is a tree growing near *C. hiemalis* in the old Crataegus Collection near the Shrub Collection with small deeply divided leaves and depressed-globose, shining, dark red-brown fruit three-

quarters of an inch in diameter. It is probably a form of *C. orientalis* with fruit of an unusual color.

Late flowers. *Chrysanthemum sibiricum*, which has been flowering for several weeks on Azalea Path, will continue to open its white flowers until the buds are killed by a hard frost. This attractive plant is still rare in gardens, although it was introduced into this country fourteen years ago by Professor Jack who found it on Poukan-shan, the mountain close to the city of Seoul. This late-flowering *Chrysanthemum* is perfectly hardy; it produces seeds freely, and spreads also by underground shoots, so that once established it is likely to be a permanent feature in the garden. It is a shrub eighteen or twenty inches tall, with slender stems, woody at base, deeply divided, pale green, pungently aromatic leaves and white daisy-like flowers an inch and a half in diameter. A form with pale rose-colored flowers has been raised in this country. A handsomer plant now in bloom is *Chrysanthemum nipponicum* which is commonly cultivated in Japanese gardens and which is believed to grow naturally on the shores of some of the smaller islands of northern Japan. It is a stout-stemmed, compact-round-topped shrub which under conditions favorable to it grows from two to three feet tall and three or four feet through. The leaves are narrowly oblong-obovate, sessile, slightly toothed toward the apex, light green and lustrous above, pale below, and thick and leathery; they stand erect, and pressed close against the stem display only their lower surface. The flowers are produced on long stout stalks, each from the axil of one of the upper leaves; and as the flower-stalks increase in length from the lowest to the one in the axil of the topmost leaf the flowers are arranged in a broad flat cluster in which buds continue to open during many weeks or until they are destroyed by cold. The flowers are daisy-like with broad, pure white ray-flowers, and are from two to two and a half inches across. The flowers of this Japanese *Chrysanthemum* are sometimes injured in Massachusetts by October frosts. It is better suited, like the Japanese Anemone, to regions which enjoy a longer autumn than that of Massachusetts. It grows well in the neighborhood of Philadelphia and there are good plants on Long Island. With the protection of a pit or a cool greenhouse it would probably continue to open its flower-buds until Christmas.

The Mountain Halesia or Silver Bell Tree. Until the beginning of the present century the botanists who visited the high Appalachian Mountains appear to have taken it for granted that the *Halesia* which grows at altitudes above 2500 feet was the same as the bushy tree of the foothills and upland valleys of the Piedmont region and southward. This idea having been generally accepted and as the lowland plant had for more than a century been common in gardens no attempt was made to cultivate the mountain tree, and the gardens of the United States and Europe have been deprived of one of the handsomest trees of the North American forests. The lowland plant, *Halesia carolina*, is usually shrubby in habit with numerous stout stems wide-spreading from a short stem, and covered with nearly smooth or slightly scaly bark. The tree of the high mountains is not rarely eighty or ninety feet high with a straight trunk sometimes three feet or three feet and

a half in diameter, often free of branches for fifty or sixty feet from the ground and covered with bark separating into great platelike scales like those of a scaly-barked Hickory or a Swamp Cottonwood. The flowers are about one-third larger and the fruit is twice as large as the flowers and fruits of the lowland tree. The habit of the plant and the large flowers and fruits are reproduced in the seedlings, which when the seeds germinate begin to grow as trees with a single stem. The seedlings show no variation in habit, and the young trees grow with a single straight stem with short branches which form a narrow symmetrical, pyramidal head. The trees often begin to flower and to produce fertile seeds before they are ten feet tall. The mountain Halesia has been described as a variety (var. *monticola*) of *H. carolina* but it will probably be, when better known, considered a species. This tree was introduced into cultivation by Mr. Harlan P. Kelsey who for many years has maintained in western North Carolina a nursery of Appalachian plants. By him it was sent to the Park Department of Rochester about twenty-five years ago, and in 1907 it came from Rochester to the Arboretum. This mountain tree has proved to be perfectly hardy in the Arboretum where it is growing rapidly and where it has now flowered and produced fruit since 1913. It is a tree which seems destined to play an important part in the decoration of American parks and which may prove useful for street and roadside planting.

Photinia villosa. This small tree or arborescent shrub which has been covered with bright red autumn leaves was last week the most conspicuous object in the Shrub Collection. It is a native of Japan and China, and although it was introduced from Japan, probably in 1864, by the Parsons Nursery at Flushing, Long Island, it does not appear to be well known in this country. Photinia is related to *Crataegus*; it has small white flowers in clusters, and small, shining, scarlet fruits which remain on the branches until after the leaves fall.

Cotinus americanus. The so-called Smoke-tree (*Cotinus cogggria*) of eastern Europe is found in many old-fashioned gardens in which it is conspicuous in summer by the great clusters of the much-lengthened, hairy, colored stems of the small flowers. Much less well known is the American species of this genus. The American Smoke-tree grows naturally only in the neighborhood of Huntsville in northern Alabama, in southern Missouri, and in eastern Oklahoma and Texas. First raised in the Arboretum in 1882 from seeds collected on the high limestone ridge a few miles south of Huntsville, Alabama, the American *Cotinus* has proved perfectly hardy here. It has grown, however, into a broad tall shrub and not as a tree, although on the Huntsville ridge trees thirty feet tall were once abundant. The "smoke" of the American species as compared with that of the Old World plant is inconspicuous, and its value is found in the splendid orange and scarlet coloring of the leaves at the end of October when it is one of the conspicuous plants of the Arboretum. A large specimen can be seen on the left hand side of the Meadow Road next to the Sumachs, and there is another by the road near the top of Peter's Hill.